

REMARKS

Claims 34-36 and 46-66 are pending in this application. Claims 36 is amended to correct informalities. Therefore, no new matter is introduced. The Office Action are discussed below.

Enablement Rejection:

On pages 2-4 of the Office Action, the examiner maintains the enablement rejection of claims 34-36 and 46-66. The examiner admits that the specification is enabling for growth of VERO cells in the medium specified in the examples. However, the examiner asserts that the specification does not reasonably provide enablement for a method for producing an immunogenic composition comprising a virus or a virus antigen comprising providing a culture of any cell, or any of a list of the cell types set forth in claims 64-66, 65 and 56-58, grown in any animal protein free medium comprising soy and yeast hydrolysate.

Applicants respectfully disagree with the examiner and submit that the specification and examples as disclosed in the specification provide sufficient support and meet the enablement requirement. Applicants point out that the claims recite media as disclosed in the specification, which are also specified in the examples, as agreed by the examiner. The claims recite "culture of cells" and the specification and examples provide working examples of "culture of cells", such as BSC-1 cells, LLC-MK cells, CV-1 cells, COS-cells, VERO cells, MDBK cells, MDCK cells, CRFK cells, RAF cells, RK-cells, TCMK-1 cells, LLC-PK cells, PK15 cells, LLC-RK cells, MDOK cells, BHK-21 cells, CHO cells, NS-1 cells MRC-5 cells, WI-38 cells, BHK cells, and RK-cells. Thus, the specification provides sufficient support and meet the enablement requirement. In this context, applicants invite the examiner to consider that:

"In order to make a rejection, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure). A specification disclosure which contains a

teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. Assuming that sufficient reason for such doubt exists, a rejection for failure to teach how to make and/or use will be proper on that basis. *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). As stated by the court, "it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure." 439 F.2d at 224, 169 USPQ at 370."

See MPEP §2164.04 (Rev. 6, September 2007 at 2100-198).

As clarified in the previous response, filed January 21, 2009, the specification provided sufficient examples to teach how to make and use of the claimed invention (see Examples 1 to 4, at paragraphs [53] to [70], for example). Applicants submit that the specification provides working examples in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As clarified in the previous response, filed January 21, 2009, the specification discloses and provides guidance to one skilled in the art for producing an immunogenic composition utilizing the "animal protein free" medium as recited in the claims. Applicants further clarified that an undue experimentation would not be required to practice the claimed invention in light of the methods described in the specification and based on what is known in the art. Accordingly, the examiner has not established a reasonable basis to question the enablement provided for the claimed invention.

The examiner maintained that Shibuya is relevant for the teaching that the skilled person cannot easily predict whether any particular culture medium would support growth of any particular cell type, and that even when culture medium is supplemented by recombinant animal products, it cannot be predicted whether growth of a particular cell type will be supported. The examiner opined that merely setting forth a few examples for growth of one cell type, using one type of culture medium, does not

provide support for the growth of any cell type, using any type of culture medium with the only requirement being that yeast and soy hydrolysates are present.

Again, applicants disagree with the examiner and point out that the invention relates to "animal protein free medium" and Shibuya disclosure relates to medium containing animal protein. Thus, Shibuya is not relevant.

The examiner opined on Shibuya that "it cannot be easily predicted whether any particular culture medium would support growth of any particular cell type, and that even when culture medium is supplemented by recombinant animal products, it cannot be predicted whether growth of a particular cell type will be supported." Applicants point out that the examiner is trying to establish the unpredictability of Shibuya's animal protein-containing medium to grow a particular cell type. Again, such experiment using animal protein-containing medium is not relevant to the claimed invention.

Ultimately, the inquiry must go beyond labels of "predictable" and "unpredictable." Rather, the examiner must undertake an analysis based upon reasonableness. First, it must be noted that the law permits a considerable amount of experimentation as long as the specification provides a reasonable amount of guidance. See *In re Wands*, 858 F.2d 731, 736, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Second, it is incumbent on the Examiner to provide an explanation of the grounds of the rejections that are backed up by evidence or reasoning to doubt applicants' assertions. See *In re Bowen*, 492 F.2d 859, 862-63, 181 USPQ 48, 50 (CCPA 1974).

The examiner also asserted that "merely setting forth a few examples for growth of one cell type, using one type of culture medium, does not provide support for the growth of any cell type, using any type of culture medium with the only requirement being that yeast and soy hydrolysates are present." The examiner admits that the specification has set forth a few examples. As discussed above and in the previously filed response (filed January 21, 2009), the specification provides working examples in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention and provides guidance to one skilled in the art for producing an immunogenic composition utilizing the "animal protein

free" medium as recited in the claims.

Contrary to the examiner's position, the Federal Circuit has held that the enablement requirement can be satisfied through broad terminology or illustrative examples. See *In re Wright*, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993).

In this context, applicants invite the examiner to consider the dictates of the MPEP that:

"For a claimed genus, representative examples together with a statement applicable to the genus as a whole will ordinarily be sufficient if one skilled in the art (in view of level of skill, state of the art and the information in the specification) would expect the claimed genus could be used in that manner without undue experimentation. Proof of enablement will be required for other members of the claimed genus only where adequate reasons are advanced by the examiner to establish that a person skilled in the art could not use the genus as a whole without undue experimentation."

See MPEP §2164.02 (Rev. 6, September 2007 at 2100-197).

Applicants also invite the examiner to consider the dictates of the MPEP that:

"An enablement rejection only can be supported when the experimentation needed to practice the claimed invention is considered 'undue' by the field. Accordingly, in making a rejection the Examiner must distinguish between routine work and undue experimentation." See MPEP § 2164.06 (Rev. 1, February 2000).

"The quantity of experimentation needed to be performed by one skilled in the art is only one factor involved in determining whether "undue experimentation" is required to make and use the invention. "[A]n extended period of experimentation may not be undue if the skilled artisan is given sufficient direction or guidance." *In re Colianni*, 561 F.2d 220, 224, 195 USPQ 150, 153 (CCPA 1977). "The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed." *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) (citing *In re Angstadt*, 537 F.2d 489, 502-04, 190 USPQ 214, 217-19 (CCPA 1976)). Time and expense are merely factors in this consideration and are not the controlling factors. *United States v. Teletronics Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), *cert. denied*, 490 U.S. 1046 (1989)."

See MPEP §2164.06 (Rev. 6, September 2007 at 2100-201).

As acknowledged by the examiner and as clarified above, the specification has set forth representative examples, and that undue experimentation would not be required to practice the claimed invention in light of the methods described in the specification and based on what is known in the art. Accordingly, the examiner has not established that a person skilled in the art would not be able to use the claimed genus as a whole without undue experimentation. In fact, the examiner has not set forth what "undue experimentation" would entail.

In view of the above, withdrawal of the enablement rejection is solicited.

Claim Rejection under 35 USC § 103:

On pages 4-5 of the office action, the examiner has maintained the obviousness rejection of claims 34-36 and 46-66 over Price *et al.* (WO 98/15614) in view of Kistner *et al.* (US Patent 5,753,489), Luderer *et al.* (US P patent 4,282,315), Gauri *et al.* (US Patent 4,322,404) and Quest International Product Information, Norwich NY, 1995, and Sheffield Pharma Ingredients, Cell Nutrition, Hydrolyzed Proteins & Yeast Extracts, Technical Manual). Applicants respectfully disagree with the examiner and refer to the arguments submitted on April 22, 2008 and January 21, 2009.

The examiner maintains that when one substitutes animal products with soy and yeast cell hydrolysates, one arrives at an animal free culture medium and concludes that animal products substituted with soy and yeast cell hydrolysates, results in an animal free cell culture medium, is not excluded in the cited reference. Applicants respectfully disagree with the examiner, refer to the arguments submitted on April 22, 2008 and January 21, 2009, and reiterate that Price *et al.* reference does not disclose an "animal protein free medium". In view of Price *et al.*'s lack of relevant disclosure, the examiner is trying to reconstruct the reference by substituting the animal products.

Applicants reiterate, a conclusion to the contrary can only be attained through a proscribed hindsight reconstruction of the prior art in view of the teachings of the applicants' specification. See *Grain Processing Corp. v. American Maize-Products*

Corp., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). In this case, the claimed methods require that an “animal protein free” medium be used and not replacing or substituting certain animal-derived products, as the examiner is attempting to do by reconstructing the Price *et al.* reference based on the knowledge gleaned from the instant specification. Such reconstruction is impermissible.

Regarding Price *et al.* reference, the examiner speculated, “when one substitutes animal products with soy and yeast cell hydrolysates, one arrives at an animal free culture medium” and such a medium “is not excluded by the reference”. However, the examiner has not addressed the fact that the Price *et al.* reference does not disclose an “animal protein free medium”. The Price *et al.* reference does not provide any guidance to a person of ordinary skill in the art to make and use the claimed invention comprising an “animal protein free medium.” The examiner has not addressed, based on Price *et al.*, how a person of ordinary skill in the art would be able to arrive at the claimed invention without undue experimentation. Consequently, the Price *et al.* reference has not been shown to be enabling.

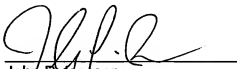
Applicants point out that the examiner’s position here directly contradicts the enablement rejection, discussed above. For example, if the practice of the claimed invention comprising growing a culture of cells as recited in claim 47 in an animal protein free medium as recited in claim 34, present a need for “undue experimentation”, then the practice of the claimed invention in a medium by reconstructing the Price *et al.*’s medium cannot be obvious to the person of ordinary skill in the art. One need to only consider Factors A-H of MPEP § 2164.01(a) (Rev. 6, September 2007 at 2100-194), where the nature of the invention, the skill in the art, and the direction provided by the inventor all factor in the determination. In considering obviousness, the examiner cannot rely upon applicants’ specification for teachings or suggestions.

In view of the above, applicants submit that a *prima facie* case of obviousness has not been established by the examiner. Accordingly, withdrawal of the obviousness rejection is earnestly requested.

REQUEST

Applicants submit that claims 34-36 and 46-66 are in condition for allowance, and respectfully request favorable consideration to that effect. The examiner is invited to contact the undersigned at (202) 416-6800 should there be any questions.

Respectfully submitted,



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